

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An ac generator for a vehicle, comprising:

a housing including a drive frame, a rear frame and a rear cover;

a rotor, supported by said housing, for providing a magnetic field;

a cooling fan fixed to said rotor for taking cooling air from outside of the rear cover;

a stator, supported by said housing and disposed around said rotor, said stator having a stator core in which a plurality of phase-windings is mounted to generate electromotive force when the magnetic field is supplied; and

a rectifying unit disposed in the rear cover and formed by a bridge circuit which includes positive electrode side rectifying elements and negative electrode side rectifying elements respectively connected to the plurality of phase-windings,

wherein the rectifying unit comprises a semicircular positive electrode side heat sink to which the positive electrode side rectifying elements are fixed and a semicircular negative electrode side heat sink to which the negative electrode side rectifying elements are respectively fixed, respectively disposed in two planes that are perpendicular to a rotation axis of said rotor,

wherein said negative electrode side heat sink comprises a pair of separate semicircular plates that have a larger outside diameter than the positive electrode side heat sink to utilize cooling air taken by said cooling fan from outside of the rear cover, and

wherein one of the positive electrode side rectifying element and negative electrode side rectifying element elements connected to at least a portion of the plurality of phase-windings is constituted of a single element and the other is constituted of parallelly

connected two elements that are respectively fixed to the semicircular members to equally
divide current flowing therethrough.

2. (Original) The ac generator for a vehicle according to claim 1, wherein the elements constituting the positive electrode side rectifying elements and the negative electrode side rectifying elements are zener diodes.

3. (Original) The ac generator for a vehicle according to claim 1, wherein one of said parallelly connected two elements is a zener diode and the other is a normal diode.

4. (Original) The ac generator for a vehicle according to claim 1, wherein each of said parallelly connected two elements has a smaller capacity than other elements.

5-8. (Canceled)

9. (New) The ac generator for a vehicle according to claim 1, wherein the negative electrode side heat sink is disposed deeper in the rear cover than the positive electrode side heat sink.